

## Patent Claims:

1. Pressure control valve, in particular for electrohydraulic brake systems, including a valve member arranged in a valve housing and a sensor element for determining the fluid pressure that prevails in the valve housing, characterized in that the fluid pressure in the valve housing (1) is indirectly determined by the sensor element (2) by way of the measurement of the deformation of the valve housing.
2. Pressure control valve as claimed in claim 1, characterized in that the valve housing deformation is transformed into a sensor signal, to what end the sensor signal, by way of a non-contact signal transmission of the sensor element (2) on the pressure control valve (9), is conducted to a signal-receiving and exciter assembly (3) which is arranged at a defined distance from the sensor element (2).
3. Pressure control valve as claimed in claim 1 or 2, characterized in that for the operation of the sensor element (2), the signal-receiving and exciter assembly (3) induces an electric voltage by way of a receiving circuit integrated in the sensor element (2) which is passed to a gauge element (4) associated with the sensor element (2).
4. Pressure control valve as claimed in any one of the preceding claims, characterized in that the sensor element (2) and/or the signal-receiving and exciter assembly (3) includes a compensating circuit to stabilize the signal strength during the signal transmission.

5. Pressure control valve as claimed in claim 3,  
c h a r a c t e r i z e d in that the gauge element (4)  
includes a reference circuit, preferably a resistance  
connection in the form of a wire gauge strain (5) fitted  
to the valve housing (1), and the measuring element signal  
and the reference signal of the wire gauge strain (5)  
representative of the valve housing deformation are  
transformed into a pressure signal by means of a signal-  
determination and evaluation circuit.
6. Pressure control valve as claimed in any one of the  
preceding claims,  
c h a r a c t e r i z e d in that the sensor element (2)  
is arranged at a deformation-sensitive area of the valve  
housing (1), preferably in the area of a thin-walled valve  
sleeve.
7. Pressure control valve as claimed in claim 6,  
c h a r a c t e r i z e d in that the sensor element (2)  
includes a gauge ring (6) and a reference ring (7)  
connected to a wire gauge strain (5), the said parts being  
preferably attached to the thin-walled sleeve area of the  
valve housing (1).
8. Pressure control valve as claimed in claim 7,  
c h a r a c t e r i z e d in that an exciter ring (8) is  
arranged so as to be coaxially spaced from the sensor  
element (2) and, along with a signal-receiving and exciter  
assembly (3), forms a construction unit which is arranged  
in a cover (10) spaced from the pressure control valve  
(9).
9. Pressure control valve as claimed in claim 8,  
c h a r a c t e r i z e d in that the cover (10)  
accommodates a controlling and/or regulating electronics

(13) that is required for the operation of the pressure control valve (9) and is electrically and mechanically connected to several electric contacts (12) of a valve coil (11) of the pressure control valve (9).

10. Pressure control valve as claimed in claim 9, characterized in that the valve coil (11), the controlling and/or regulating electronics (13), and the signal-receiving and exciter assembly (3) are combined to form a prefabricated subassembly in the cover (10) which latter is mounted onto a valve-accommodating member (14) that carries the pressure control valve (9).

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